

CASES

CASE 1

A female patient 55 years old was admitted to hospital with severe chronic heart failure. Her pulse rate was 120/min. & regular. Investigations were done and treatment was started in the form of: rest, salt restriction, digitalis, thiazides and a vasodilator.

1. What is the value of salt restriction?? What happens if she neglects it??
2. How does digitalis increase the myocardial contractility?? → ↓ Na K ATPase
3. What is the effect of digitalis on the ECG?? → saggy ST, T flat or inverted
4. Enumerate the side effects of thiazides. → if toxicity → arrhythmia
5. What are the different types of vasodilators that can be used in heart failure?
6. Would you or would you not prescribe Beta-blockers in this case??

NO, as severe grade

hydralazine
- ACEI
- ARBs
- Nitrates
- Na Nitroprusside
- Prazosin

The patient's condition improved on such treatment & she stayed in good health for several days. On the 10th day in hospital, her pulse rate became 65/min. and her health was still good. Five days later, the patient vomited repeatedly, complained of headache, & rapid regular palpitation. BP was 70/40, Pulse was 220/min & regular. ECG was done immediately & revealed A/V dissociation with p rate of 70/min & wide QRS complexes at a rate of 220/min.

7. What is the problem with the patient??
8. Mention another condition in which the ECG reveals A/V dissociation.
9. Why are the QRS complexes wide??
10. Mention other causes of wide QRS complexes in the ECG.
11. What laboratory investigation would you like to request immediately??
12. What should the doctors have done on the 10th day??
13. What is the role of carotid massage in this case??
14. What is the role of DC cardioversion in this case??
15. What medication would you like to discontinue at once??
16. What is the drug of first choice that should be given at once??

CHB 30-40

VTac 200

Sinus tachy 160

الحاج يجرى
H.F
فقط
tachyc.
وعلى
digitalis

Serum K⁺
and Jk
aggravates
H.F.
وهو يخفض
Thiazide

any vent.
anhylla
• ↑K
• BBB
• WPW

BP = 70/40 → hemodynamically unstable

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و ما أعلى، رغم كذا DC في السبب

VF لوعلى DC قتل د. digitalis

الكل مع الشوك
وإلى anhylla

no role
as vagus

escapes ventricles
White Knight Love

4 hypo
4 hyper

VTac
wide
Bizarre
(focus - ventric)
سريع
CHB
وسرعة
القلب
220

ب النقص
سريع
تقل جرة
digitalis
طال
HR 70
ما تدبش
للحياة
حياة
digitalis

VISIT...

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CASE 2

A male patient 58 years old, heavy smoker & diabetic on oral hypoglycemic drugs presented to the hospital with an attack of heart burn, vomiting & dyspepsia of 4 hours duration. The symptoms occurred following a heavy meal.

On examination:

Pallor & sweating.

BP: 180 / 115.

Pulse: 120 / min & regular.

Temp: 37.8 °C.

ECG: elevated convex ST segment in leads V₁ to V₄.
dry pericarditis Concave MI convex Prinzmetal flat

1. What is your clinical diagnosis ?? *recent Antero-septal MI*
2. What is the most important investigation you should request ?? *enzymes*
3. What is the most urgent line of ttt that should be given to the patient ?? *SK Fibrinolytic therapy*

ECG was repeated one hour later & revealed:

Pathological Q waves in leads V₁ to V₄.

4. What is your anatomical diagnosis ?? *Anterior descending A-*
5. Enumerate the risk factors in this patient. *smoke, Age, DM, heavy meal*
6. Explain the absence of chest pain in this patient. *DM autonomic neuropathy*

Complication

Six hours later, the patient started to suffer from acute chest pain.

On examination:

Pallor & sweating disappeared.

BP: 140 / 100 on ttt.

Pulse: 100 / min & regular on ttt,

Temp: 37.8 °C.

ECG was repeated & revealed: ST segment elevation became extensive in all leads.

7. What happened to the patient ?? How would you ttt this recent event ?? *Acute dry pericarditis Analgesics Anti-inflammatory*
8. Describe one clinical sign to confirm your diagnosis. *Discuss Rub*
9. Mention 3 most preferred drugs to lower this patient's BP ??
10. What is the ttt that should not be used to lower this patient's BP ??

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ACE-I, BB, CCB (Hf. G-protein)
renally, anti-HTN, anti-anginal

Hydralazine, Nitroglycerin, Hinoxidil
White Knight Lane

Next day in the early morning, the resident was called urgently by the nurses who got alarmed by the beeping monitor. They found the patient in severe pallor, sweating and cold extremities.

On examination:

BP: 70 / 50.

Pulse: 140 / min & very faint.

Cardiogenic shock

*Co
neurogenic
brady card*

11. What complication did this patient develop ??
12. What caused this complication to occur ??
13. Mention 3 main hazards of this new complication ??

*extension of infarction
↑ size*

- 1 Brain → stroke
- 2 Heart → MI enlarges & H.F.
- 3 Kid → ARF (prerenal) → ATN
acute tubular necrosis

The patient was urgently admitted to hospital and 3 hours later, his consciousness level started to deteriorate so that: he became confused, his eyes opened only in response to pain and his limbs flexed in response to pain.

6. Explain the deterioration in the patient's consciousness.
7. How severe is the deterioration in the patient's consciousness ??
8. What other complications can this patient develop ??

CASE 3

A female patient 44 years old presented to the hospital with a sudden severe headache especially at the back of the head & neck associated with sudden vomiting.

On examination:

- o BP: 160 / 95.
- o Pulse: 120 / min.
- o Temp.: 37.4 ° C.
- o Fundus: Papilloedema.
- o Eye: Divergent paralytic squint of the left eye.
- o Neck: Rigidity.
- o Trunk: High arched back.

} = meningeal irritation

1. What are the likely possibilities ??
2. What are the specific clinical tests that support these possibilities ??
3. How would you investigate this patient to reach the proper diagnosis ??
4. What is the most common cause of the most probable diagnosis in this patient ?
5. Comment on the eye findings.

SAH or meningitis → as sudden HTN no fever
 * CT → +ve → SAH → angiography to localize
 -ve → SAH 10% meningitis } differentiate by CSF
 Rupture aneurysm
 Papilloedema (2+)
 Divergent squint III

The patient was urgently admitted to hospital and 3 hours later, his consciousness level started to deteriorate so that: he became confused, his eyes opened only in response to pain and his limbs flexed in response to pain.

6. Explain the deterioration in the patient's consciousness.
7. How severe is the deterioration in the patient's consciousness ??
8. What other complications can this patient develop ??

① hematoma ↓ cortical neurons

② diffuse edema

③ ischemia

→ 4 + 2 + 3 = 9

CASE 1

A male patient, 58 years old, heavy smoker since 35 years presented to the outpatient clinic with moderate dyspnea, right sided dull aching chest pain of gradual onset dating one month back. The patient had lost 15 kg of his body weight over the last 3 months. He also stated that he experienced 2 episodes of blood stained sputum.

On examination:

Temp:	37.8 ° C.
Heart:	clinically free.
Abdomen:	clinically free.
Neurological examination:	bilateral symmetrical proximal muscle weakness in both upper & lower limbs with hypotonia & hyporeflexia.
Chest:	central trachea, Dullness in the right back up to the 6 th space posteriorly.

1. What is the most important diagnosis ??
2. Mention 2 most important investigations to start with.
3. What is definitive investigation to confirm your diagnosis ??
4. Comment on the neurological examination.
5. Describe the pathology of this disease.

CASE 2

A 37 y/o female with a history of asthma, presents to the ER with tachypnea, and acute shortness of breath with audible wheezing. Patient has taken her prescribed medications of Disodium cromoglycate and Salbutamol at home (four hours before) with no relief of symptoms prior to coming to the ER. A physical exam revealed the following: HR 125, RR 40, with signs of accessory muscle use. Auscultation revealed decreased breath sounds with inspiratory and expiratory wheezing and patient was coughing up small amounts of white sputum.

1. Specify the exact diagnosis of the patient's condition.
2. Mention one most important investigation.
3. Mention your strategy in treating this problem.

1. What is the most important diagnosis??
2. Mention 2 most important investigations to start with.
3. What is definitive investigation to confirm your diagnosis??
4. Comment on the neurological examination.
5. Describe the pathology of this disease.

CASE 1

A 65 years old man, right handed, diabetic since 7 years, hypertensive since 10 years woke up 3 days ago with marked weakness in his right upper & lower limbs. The patient was fully conscious & gave a detailed history of his condition.

On examination:

- o BP: 190 / 110.
- o Pulse: 100 / min.
- o BMI: 36 Kg / m².
- o Motor: Right sided weakness affecting the UL & LL to the same extent:

UL: extensors (absolutely no movement),
flexors (active movement against gravity but not against resistance).
LL: flexors (absolutely no movement),
extensors (active movement against gravity but not against resistance).

- o Tone: Hypotonia affecting the Right UL & LL to the same extent.
- o Reflexes: Diminished in both Right UL & LL.
- o Cranial nerves:

*The patient's mouth was deviated to the left side.
The patient's tongue was deviated to the right side.*

- FBS was done: 135 mg / dL. 2hpp: 190 mg / dL.

1. What is your possible diagnosis ??
2. What is the other possibility you should exclude ??
3. How would you confirm your diagnosis ??
4. Specify the degree of motor weakness in the UL & in the LL.
5. Enumerate the risk factors in this patient.
6. What is the laboratory investigation you would ask for this patient ??

The patient was admitted to hospital where general & specific treatment was started.

He stayed in hospital for 4 weeks & was then discharged. He was advised to come for follow up after 2 months.

7. Describe the general care that this patient should receive in hospital.
8. Would you give anticoagulants in this case ??
9. Mention the most important 2 lines of treatment in this patient.
10. What are the neurological changes you expect to find on follow up ??

The patient's condition improved gradually & after 3 months he started to walk.

11. Describe the expected gait of this patient.

He came one year later complaining of recent recurrent attacks of vertigo, tinnitus, disequilibrium together with dysphagia & dysarthria. He stated that often during the attacks he suffered from limitation of eye movement on looking outwards.

The patient also described some other attacks of sudden transient loss of consciousness.

12. How can you explain the new problem of the patient ??

13. Mention 2 most important investigations you would like to ask.

14. Describe the details of the serious event that this patient is at risk to develop.

1. What is the most likely possibility ??

2. Comment on the sensory changes.

3. Mention 3 most important investigations ??

TRUE OR FALSE

CASE 2

A 29 years old female presented to the hospital with an acute onset of vertigo, vomiting & deviation to the right side when she walked.

On examination:

BP: was 125 / 80, Pulse: irregular; 110 / min over the apex & 88 / min. over the radial pulse.

Rumbling diastolic murmur over the apex.

Ptosis & miosis in her right eye. & loss of pain sensation over the right side of the face + lost pain sensation over the left side of the body.

The uvula was pulled to the left side.

1. What is the most likely possibility ??
2. Comment on the sensory changes.
3. Mention 3 most important investigations ??

TRUE OR FALSE

- Incontinence of urine occurs in occlusion of the cortical paracentral branch of the ACA of the dominant hemisphere.
- In occlusion of the cortical paracentral branch of the ACA, there is loss of pain & temp. sensation in the LL.
- Hypothalamic syndrome includes diabetes insipidus, obesity & somnolence.
- Bilateral Ankle Clonus occurs in paraplegia in flexion.
- In callosal branch occlusion, there is apraxia on the side of the dominant hemisphere.
- Positive grasp reflex occurs in occlusion of the frontal branch of the MCA.
- Spinal paraplegia is the most common cause of paraplegia.
- Auditory agnosia occurs in tumours of the occipital lobe.
- In occlusion of the LSA, there is contralateral complete hemiplegia affecting UL & LL equally.
- Aphasia occurs only in occlusion of the LSA of the dominant hemisphere.
- Lower quadrantic homonymous hemianopia occurs in occlusion of the parietal branch of the MCA.
- Cytoalbuminous dissociation in the CSF occurs in DS, GB syndrome & extramedullary paraplegia.
- Headache of intrasellar pituitary tumour starts bitemporal & ends up generalized.
- In occlusion of the cortical parietal branch of the MCA, there is facio-brachial monoplegia.
- In cauda equina, automatic bladder occurs if the lesion is bilateral & affects S2,3,4 roots.
- In Carotid TIAs, transient contralateral blindness occurs.
- Pellagra is an important cause of focal paraplegia.
- In vertebro-basilar TIAs, transient aphasia occurs.

- Retention of urine with overflow occurs in paraplegia in extension.
- Vertigo is a common manifestation of vertebro-basilar TIAs.
- In intramedullary paraplegia, bladder affection occurs in the form of autonomic bladder.
- Radicular manifestations of paraplegia occur specifically in extramedullary lesions.
- In PICA, there is exaggerated palatal & pharyngeal reflex on the affected side.
- In PICA, there is contralateral loss of pain & temperature sensations over the body.
- MND causes spastic paraplegia but not flaccid paraplegia.
- PICA is an important cause of unilateral ptosis.
- GB syndrome is a cause of flaccid paraparesis.
- In acoustic neuroma, there is ipsilateral hemiplegia & contralateral ataxia.
- Eye manifestations in TIAs include: diminution of vision, double vision, & maybe squint.
- The cerebellum receives its blood supply from the carotid artery.
- The ASA supplies the entire gray & white matter of each segment of the spinal cord.
- In glioma of the spinal cord, retention with overflow occurs.
- Uncal herniation is associated with disturbed respiration.
- The Thalamo-geniculate artery supplies the dorsal half of the internal capsule.
- There is no change in the CSF pressure on bilat jug vein compression in intramed paraplegia.
- Thalamic pain is one of the manifestations of PCA occlusion.
- In CSF, There is decrease in proteins, sugar & chloride in meningism.
- TB meningitis should be treated with corticosteroids plus anti TB drugs.
- Acromegaly is a manifestation of suprasellar pituitary tumours.
- Visual agnosia occurs in occlusion of the cortical branch of the MCA.
- The circle of Willis is related posteriorly to the medulla.
- In transverse myelitis, the vibration sense in the LL is lost.

- The Posterior communicating artery connects the ICA & the PCA.
- In intrasellar pit tumours, Anosmia occurs due to posterior compression by the tumour.
- Projectile vomiting is the most reliable manifestation of ICT.
- In systemic paraplegia, there is sensory level.
- In extramedullary paraplegia, there is sensory level below which there is dissociated sensory loss.
- Sphincteric affection is early in intramedullary lesions & late in extramedullary lesions.
- In paraplegia, positive signs in plain x ray occur in extramedullary lesions only.
- In extramedullary paraplegia, myelography reveals increased width of the cord with short tails (fusiform shape).
- Spontaneous coagulation of the CSF occurs in extramedullary paraplegia.
- Vibration sense is preserved in syringomyelia & ASA occlusion.
- Deep sense is preserved in conus medullaris & epiconus lesions.
- Manifestions of flaccid paralysis in cauda are asymmetrical & lack fasciculations.
- TB meningitis is associated with excess neutrophils in the CSF.
- Adrenal gland affection may be fatal in meningitis.
- Conus medullaris lesion leads to LL paralysis of UMN nature.
- Antidepressant drugs are effective in the prophylaxis against migraine.
- Antianginal drugs are effective in the prophylaxis against migraine.
- Grand mal epilepsy is preceded by aura & followed by Todd's paralysis.
- Deep sensory loss occurs in some cases of MND.
- In epilepsy, stress & sleep deprivation are dangerous.
- Changes in serum Na, Ca & glucose may cause convulsions.
- Phenytoin is the drug of choice for Petit Mal Epilepsy.
- Rigidity is a constant feature in extrapyramidal syndromes.
- Sinemet is the drug of choice for tremors in Parkinsonism.
- In Fried ataxia there are signs of co-ordination with the eyes open & ↑ on eye closure.

- In DS, CER is the best investigation.
- Tonic atrophy may occur in cervical spondylosis.
- In DM, bilateral foot & wrist drop are common manifestations.
- A deeply comatized patient has a Glasgow coma scale of 1 / 15.
- Vascular headache is the most common cause of headache.
- Migraine is almost always preceded by aura.
- Anticoagulants are always indicated in patients with stroke.
- Heart failure is a contraindication for anticoagulants in stroke.
- Convulsions occur only in cerebral & not in cortical hemiplegia.
- Investigating the mediastinum is important in patients with Myasthenia.
- True bulbar palsy is associated with quadriplegia.
- Pellagra may be associated with flaccid paraplegia.
- In myopathy, weakness is distal more than proximal.
- A pontine lesion may cause loss of pain & temp sensation over the face.
- Post-herpetic neuralgia commonly affects the maxillary division of the Trigeminal n.
- Bell's palsy & injury during surgery are the most common causes of LMNL in facial n.
- Cerebellopontine angle tumours may cause vertigo as well as bulbar symptoms.
- UMNL of the facial nerve is associated with paralysis of the lower half of the face on the same side of the lesion.
- Bell's palsy occurs due to bacterial infection of the facial nerve endings.
- In SAH, CSF reveals diminished sugar & chloride.
- MND causes pseudobulbar but not true bulbar palsy.
- Arsenic PN is purely sensory.
- Hyperlipidemia is the most serious risk factor for cerebrovascular stroke.
- There is bilateral & symmetrical sensory loss in the LLs in cauda equina.
- Vasculitis is the most common cause of TIAs.
- In anterior spinal artery occlusion, there is negative Romberg's test.
- Heart failure is a recognized cause for cerebral infarction.

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- In myopathy, there are no fasciculations.
- Hypotonia is a prominent feature in Parkinsonism.
- Intake of Major tranquilizers may cause intention kinetic tremors.
- Myasthenia causes descending muscle weakness associated with hyperreflexia.
- Important side effects of statins include secondary myopathy & reversible elevation of the liver enzymes.
- Callosal branch occlusion leads to apraxia on both sides of the body.
- Precipitancy of micturition occurs in the shock stage of spastic paraplegia.
- Rupture of an intracranial aneurysm is the most common cause for SAH.
- Cepalosporins are the drugs of choice in ttt of meningococcal meningitis.
- Bacterial encephalitis such as typhoid is the most common cause of encephalitis.
- Pott's disease of the spine leads to loss of superficial sensory loss in the LLs but spares the deep sensations.
- Cervical spondylosis is a recognized cause of headache.
- Drugs which inhibit serotonin receptors are very effective in the ttt of an attack of migraine.
- Rifampicin is used in the ttt of meningitis & Leprosy.
- Lead neuropathy is mainly a motor neuropathy.
- Crossed hemiplegia occurs in carotid system occlusion.
- In lesion of the conus medullaris, there is radicular sensory loss in the LLs.
- In acute disc prolapse, X-ray shows sclerosis & osteophytes.
- In Bell's palsy, there is preservation of the emotional & associated movements.
- Sphincteric troubles occur very late in secondary myopathy.
- Wasting of the tongue occurs in Syringobulbia.
- In Fried ataxia, there is stock & glove hyposthesia.
- In diabetic PN, ischemia of the nerves may cause the neuritis.
- In hemiplegia, spasticity affects the flexors more than the extensors in both ULs & LLs.